

ABSTRACT

A voltage-controlled oscillator includes a voltage-controlled phase-shift circuit, outputting a signal with the shift deviated from an input signal by a specified amount with an external control voltage V_t , a SAW resonator, a buffer, inputting a resonance signal having a specified resonance frequency from the SAW resonator, outputting a clock signal with a desired frequency, and outputting a positive-feedback-oscillation-loop output signal, wherein the voltage-controlled phase-shift circuit, the SAW resonator, and the buffer construct a positive-feedback oscillation loop, in which the frequency temperature characteristic of the SAW resonator is rotated by a specified amount using the temperature characteristic of the propagation delay time of the buffer to correct the frequency temperature characteristic of the SAW resonator.